

the mine, the WLs for the mine for that year will be estimated if possible as follows:

(A) If annual average measurements exist within four (4) years of the year in which the claimant was employed in the mine, the measurements for the two years closest will be averaged, and that value will be assigned to the year the claimant was employed in the mine;

(B) If one or more annual average measurements exist for a mine, but are not more than five (5) years from the year the claimant was employed, the annual average closest in time will be assigned either forward or backward in time for two years.

(3) If the methods described in paragraph (g) (1) and (2) of this section interpolate or project the annual exposure level measured in WLs for a mine in a year in which the claimant was employed in the mine, an estimated average for mines in the same geographical area will be used for that year. An estimated area average is calculated as follows:

(A) If actual measurements from three or more mines, totaling at least ten measurements, are available from mines in the same locality as the mine in which the claimant was employed, the average of the measurements for the mines within that locality will be used.

(B) If there were insufficient actual measurements from mines in the same locality to use the method in paragraph (g)(3)(A) of this section, an average of exposure levels in mines in the same mining district will be used if there are at least ten measurements from at least three mines in that district.

(C) If there are insufficient actual measurements from mines in the same mining district, the average of exposure levels in mines in the same state will be used.

(D) If there are insufficient actual measurements from mines in the same state, the estimated average for the state of Colorado for that year will be used.

(4) If the year in which the claimant was employed in the mine was 1947 to 1949, the annual exposure level measured in WLs will be estimated by aver-

aging the earliest recorded exposure levels in mines of the same or similar type, ventilation, and ore composition closest to the mine.

(h) A claimant's total exposure to radiation expressed in WLMs, for purposes of establishing eligibility under § 79.32(c), will be calculated in the following manner:

(1) The annual exposure level measured in WLs for each mine for periods of employment established under § 79.33(b) will be calculated by using the methodology in paragraph (f) of this section;

(2) The annual exposure level measured in WLs for each mine will be multiplied by the time period, measured in months, that the claimant was employed in the mine, yielding a claimant's exposure to radiation expressed in WLMs;

(3) The claimant's exposure to radiation expressed in WLMs for each mine in which the claimant was employed in one of the specified states during the designated time period will be added together to yield the claimant's total exposure to radiation expressed in WLMs.

§ 79.35 Proof of lung cancer.

(a) Written medical documentation is required in all cases to prove that the claimant developed primary cancer of the lung. Proof that the claimant developed primary cancer of the lung must be made either by using the procedure outlined in paragraphs (b), (c) or (d) of this section or submitting the documentation required in paragraph (e) of this section.

(b) *Verification by PHS or NIOSH records.* In all cases the Radiation Exposure Compensation Unit will search the records of the PHS or the National Institute for Occupational Safety and Health (NIOSH) created or gathered during the course of any health studies conducted or being conducted by these agencies of uranium miners during or including the period 1947-1971, to determine whether the records contain proof of the claimant's eligibility. The Unit will accept as proof of medical condition the verification of the PHS or NIOSH that they possess medical records or abstracts of medical records of the claimant that contain a verified

diagnosis of lung cancer. If these agencies do not possess medical records or abstracts of medical records that contain a verified diagnosis of lung cancer, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit the written medical documentation required in paragraph (e) of this section, in accordance with the provisions of § 79.52(b).

(c) *Verification by the State cancer or tumor registry.* If a claimant was diagnosed as having primary cancer of the lung in the States of Arizona, Colorado, Nevada, New Mexico, Utah, or Wyoming, the claimant or eligible surviving beneficiary need not submit any written medical documentation of medical condition at the time the claim is filed (although written medical documentation may subsequently be required). Instead, the claimant or eligible surviving beneficiary must submit with the claim an Authorization To Release Medical or Other Information, valid in the state of diagnosis, that authorizes the Radiation Exposure Compensation Unit to contact the appropriate state cancer or tumor registry. The Unit will accept as proof of medical condition verification from the state cancer or tumor registry that they possess medical records or abstracts of medical records of the claimant that contain a verified diagnosis of primary cancer of the lung. If the state does not possess medical records or abstracts of medical records that contain a verified diagnosis of primary cancer of the lung, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit the written medical documentation required in paragraph (e) of this section, in accordance with the provisions of § 79.52(b).

(d) *Verification by a federally-supported health-related study.* If medical records regarding the claimant were gathered during the course of any federally-supported health-related study of uranium miners, the claimant or eligible surviving beneficiary need not submit any written medical documentation of medical condition at the time the claim is filed (although written medical documentation may subsequently be required). Instead, the claimant or

eligible surviving beneficiary must submit with the claim an Authorization To Release Medical or Other Information, valid in the state of diagnosis, that authorizes the Unit to contact the custodian of the records of the study to determine if proof of the claimant's eligibility is contained in the records of the study. The Unit will accept as proof of medical condition copies of medical records or abstracts of medical records of the claimant that contain a verified diagnosis of primary cancer of the lung. If the custodian does not possess medical records or abstracts of medical records that contain a verified diagnosis of primary cancer of the lung, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit the written medical documentation required in paragraph (e) of this section, in accordance with the provisions of § 79.52(b).

(e) Proof that the claimant contracted primary lung cancer may be made by the submission of one or more of the following contemporaneous medical records, provided that the specified document contains an explicit statement of diagnosis or such other information or data from which the appropriate authorities at the National Cancer Institute can make a diagnosis to a reasonable degree of medical certainty.

(1) Pathology report of tissue biopsy, including, but not limited to specimens obtained by any of the following methods:

- (i) Surgical resection;
- (ii) Endoscopic endobronchial or transbronchial biopsy;
- (iii) Bronchial brushings and washings;
- (iv) Pleural fluid cytology;
- (v) Fine needle aspirate;
- (vi) Pleural biopsy;
- (vii) Sputum cytology;
- (2) Autopsy report;
- (3) Bronchoscopy report;
- (4) One of the following summary medical reports:
 - (i) Physician summary report;
 - (ii) Hospital discharge summary report;
 - (iii) Operative report;
 - (iv) Radiation therapy summary report;

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(v) Oncology summary or consultation report;

(5) Reports of radiographic studies, including:

- (i) X-rays of the chest;
- (ii) Chest tomograms;
- (iii) Computer-assisted tomography (CT);
- (iv) Magnetic resonance imaging (MRI);

(6) Death certificate, provided that it is signed by a physician at the time of death.

§ 79.36 Proof of non-malignant respiratory disease.

(a) Written medical documentation is required in all cases to prove that the claimant developed a non-malignant respiratory disease. Proof that the claimant developed a non-malignant respiratory disease must be made either by using the procedure outlined in paragraphs (b) or (c) of this section, or submitting the documentation required in paragraph (d) of this section.

(b) *Verification by PHS or NIOSH records.* In all cases the Radiation Exposure Compensation Unit will follow the procedures set forth in § 79.35(b) to establish the claimant's eligibility based on the development of a non-malignant respiratory disease.

(c) *Verification by a federally-supported health-study.* The Unit will follow the procedures set forth in section 79.35(d) to establish the claimant's eligibility based on the development of a non-malignant respiratory disease.

(d) Proof that the claimant contracted a non-malignant respiratory disease may be made by the submission of the following contemporaneous medical records, provided that the specified document contains an explicit statement of diagnosis or such other information or data from which the appropriate authorities designated by the Surgeon General or NIOSH can make a diagnosis to a reasonable degree of medical certainty. For purposes of this section, a statement of diagnosis in any of the Indian Health Service records listed below of "restrictive lung disease" will be considered equivalent to a diagnosis of pulmonary fibrosis.

(1) Pulmonary fibrosis or fibrosis of the lung.

(i) If the claimant is deceased, one or more of the following medical records:

- (A) Pathology report of tissue biopsy;
- (B) Autopsy report;
- (C) If x-rays exist, the x-rays and interpretive reports of the x-ray(s) by two certified "B" readers classifying the existence of fibrosis of Category 1/0 or higher according to the ILO 1980, or subsequent revisions;

- (D) If no x-rays exist, an x-ray report;
- (E) Physician summary report;
- (F) Hospital discharge summary report;

- (G) Hospital admitting report;
- (H) Death certificate, provided that it is signed by a physician at the time of death.

(ii) If the claimant is alive, (A) One of the following:

(1) *Chest x-rays and two "B" reader interpretations.* A chest x-ray administered in accordance with standard techniques on full size film at quality 1 or 2, and interpretative reports of the x-ray by two certified "B" readers classifying the existence of fibrosis of category 1/0 or higher according to the ILO 1980, or subsequent revisions; or

(2) *Pathology reports of tissue biopsies.* A pathology report of a tissue biopsy, but only if performed for medically justified reasons; and

(B) One or more of the following:

(1) *Pulmonary function tests.* Pulmonary function tests consisting of three tracings recording the results of the forced expiratory volume in one second (FEV1) and the forced vital capacity (FVC) administered and reported in accordance with the Standardization of Spirometry—1987 Update by the American Thoracic Society, and reflecting values for FEV1 or FVC that are less than or equal to 80% of the predicted value for an individual of the claimant's age, sex, and height, as set forth in the Tables in Appendix A; or

(2) *Arterial blood-gas studies.* An arterial blood-gas study administered at rest in a sitting position, or an exercise arterial blood-gas test, reflecting values equal to or less than the values set forth in the Tables in Appendix B of this part.

(2) *Cor pulmonale.* Proof of pulmonary fibrosis as prescribed in paragraph (d)(1) of this section and one or more of the following medical records: